

IN THE SPECIFICATION:

Please amend the specification as follows:

At page 7, line 19 thru page 8, line 2:

The spline housing 28 is provided with a plurality of involute splines or teeth 48 extending longitudinally along the interior surface of the spline housing 28 as shown in Fig. 5. The upper end 25 is connected to the spacer housing 30. Fig. 6 illustrates another embodiment of a spline housing 28a having a plurality of equi-spaced splines or teeth 48a. The upper end 25a 23 of the spline housing is connected to the spacer housing 30.

At page 9, lines 5-8:

The interior side of each centralizing leaves 34 is provided with a cam surface 72 71 as may be seen in Fig. 9B. The centralizing leaves 34 34b are provided with medial grooves 78 adapted to receive the bridges 77 of the leaf barrel 32 32a to stabilize the centralizing leaves 34 34b in the expanded condition.

At page 10, lines 3-15:

As shown in Figs. 12A and 12B, the mandrel 82 has an internal bore 90 extending therethrough from an upper end 83 to a lower end 89. The upper end 83 of the mandrel 82 is provided with internal threads 91 for connection with a drill collar or drill pipe. Telescopic movement of the mandrel 82 relative to the centralizing leaves 34 causes the centralizing leaves 34 to move between the expanded position and the collapsed position. To affect the movement of the centralizing leaves 34 to the expanded position, the mandrel 82 is provided with a cam surface 94 near the lower end 89 thereof. The cam surface 94 cooperates with the cam surface

71 72 of the centralizing leaves 34 to force the centralizing leaves 34 radially outward to the expanded position upon telescopic contraction of the mandrel 82 into the housing assembly 20. Upon telescopic expansion of the mandrel 82 from the housing assembly 20, the elasticity of the centralizing leaves 34 causes the centralizing leaves 34 to return to the collapsed position. Contact of the centralizing leaves 34 with the sidewall of the well bore 14 may assist in returning the centralizing leaves 34 to the collapsed position.

At page 10, line 16 thru page 11, line 11:

The mandrel 82 is further provided with an annular recess 96 sized to hold the trip ring 81 (Fig. 10A) so as to restrain longitudinal movement of the mandrel assembly 22 relative to the housing assembly 20 in the drilling position. The trip ring 81 is fabricated to be released from the annular recess 96 upon the application of a longitudinal pulling force on the drilling string 12 which translates into a predetermined axial force in the ring. The axial forces created in the trip ring 81 are determined by the length of the ring L; the thickness of the ring T; and, most significantly, the angle A of the trip ring edges and the angle of the shoulder 97 of the annular recess 96 of mandrel 82. As will be described in more detail below, the pulling force required to overcome the predetermined axial force to "open" the trip ring 81 may be varied to provide an indication of where the drill string 12 is stuck in the well bore hole. It should further be appreciated that other retaining members can be used in place of a trip ring. For example, the housing assembly 20 may be provided with a friction grip collet quick release device which is adapted to mate with a corresponding recess in the mandrel 82. Other friction trips or shear pins may be used, but one time trips have the disadvantage of requiring requirement the drill string 12 to be withdrawn from the well hole. Fig. 12C illustrates the details of the trip ring operation mechanism noted in Fig. 12A at reference numeral 12c.

At page 12, line 14 thru page 12, line 7:

The ends 120 of the splines 105 are beveled to facilitate engagement with the spline housing 28 when the mandrel assembly 22 is moved from the released position to the drilling position. The beveled ends of the splines 105 additionally prevent damage to the splines 105 upon the ~~upon~~ the mandrel assembly 22 being released from the drilling position. That is, upon the release of the mandrel assembly 22 from the drilling position as a result of a pulling force being applied sufficient to overcome the tripping force of the trip ring 81, the mandrel assembly 22 travels upwardly until the upper end 103 of the spline mandrel 86 impacts the wear ring 49 thereby producing a hammer type action within the subassembly 11 that may loosen or free the stuck drill string. The beveled ends 120 of the splines 105 also prevent damage to the splines 104 when the mandrel assembly 22 is moved to the drilling position. Upon initial engagement of the spline mandrel 86 with the spline housing 28, the drill string 12 may be lowered to cause the lower end of the spline mandrel 86 to impact the adjacent wear ring 49 and produce a downward hammer type action that may loosen or free the stuck drill string.